182
Kuser

State of New Jersey
DEPARTMENT OF AGRICULTURE
BUREAU OF CHILD NUTRITION PROGRAMS

received
10/24/03
KT

JAMES E. MCGREEVEY
Governor

CHARLES M. KUPERUS
Secretary of Agriculture

October 24, 2003

Food Guide Pyramid Reassessment Team
USDA Center for Nutrition Policy and Promotion
3101 Park Center Drive, Room 1034
Alexandria, VA 22302

To Whom It May Concern:

Below are a compilation of comments from various personnel from the New Jersey Department of Agriculture, Division of Food and Nutrition.

General comments, not specific to the proposed changes:

- Need to differentiate between good and bad fats.
- Beans and nuts should be separated out from the meat group because of positive. benefits for these sources of protein on weight loss and heart disease.
- Need to emphasize whole grains in the bread & cereal group.
- Physical activity/exercise should be included in the new pyramid to emphasize its importance.
- Increased intake of vegetables, poultry, fish and dairy should be incorporated in the recommendations.
- Emphasize greater intake of fruits, vegetables, and protein; less emphasis on "carbs": suggestion to place fruits and vegetables at the base of the pyramid and pasta and whole grain breads near the top.
- Emphasize the importance of fiber intake; i.e. through more whole grains, etc.

Comments more specific to proposed daily food intake patterns:

- There is agreement to using sedentary, low active and active categories in assigning calorie intake levels, and also agreement to using the sedentary levels for the target pattern…this will help to discourage over-eating. However…there needs to be a prominence somewhere in the proposal regarding the necessity and extreme importance of combining proper eating with physical activity…the two must go hand in hand.
- Under "Additional Fats", a suggestion was made to discourage use of margarine due to the trans fatty acid content; also there needs to be a clear differentiation between "good" and "bad" fats.
- Table 1:
    - Some feel that the recommend intake level of grains is still too high…especially the "other grains" category. Dr. Walter Willett from the

297
Kuser

Harvard School of Public Health, in his book *Eat, Drink, and Be Healthy,* cites in great detail the detrimental effects of certain carbohydrates that have high glycemic index levels…where they are broken down into sugars at a very rapid rate, causing swift high spikes in blood sugar, followed by similar surges in insulin. The surge in insulin then forces glucose into muscle and fat cells, causing blood sugar levels to then plummet, resulting in signals of hunger that trigger the person to eat more…thus into a pattern of over eating. These extreme surges in blood sugars have been related to part of the "perilous pathway to heart disease and diabetes…and are especially serious for people who are overweight" (p.19). Suggestions are to give greater differentiation between whole grains (recommend higher intake levels) and high starch items, such as white bread, white rice, potatoes, pasta (recommend lower intake levels).

  - It was also suggested to differentiate types of protein source foods, rather than lumping everything together as "meat and beans". It is felt that red meat should be separated out from poultry and fish, having it's own recommended level of intake (which should be less because of the high saturated fat content) and that beans/nuts should be separated out, also (with higher recommended levels because of the additional advantages of fiber, vitamins, minerals and healthy unsaturated fats and a host of phytochemicals that research is documenting more and more as protection against several chronic diseases).
  - Serving sizes versus cups or ounces: general consensus is that it would be much more advantageous for the consumer to indicate recommended food intake levels in cups and ounces, rather than "servings". This makes it much clearer to understand…there is currently too much confusion about what a serving size is.

- For the development of consumer materials it was suggested to include an easily identified way to choose foods from the food groups in conjunction with choosing them at the supermarket…for example the 5 A Day Color Way campaign by the Produce for Better Health Foundation is a very easy way for the average consumer to understand the selection of a variety of fruits and vegetables for better health. The message needs to be kept as simple as possible! Too much information is as detrimental and not enough information. Please include physical activity and weight control as part of educating consumers for general healthy eating behavior.

Thank you for the opportunity to comment.

Sincerely,

Kathy F. Kuser

Kathy F. Kuser, Director
Division of Food and Nutrition

192
Culver

STATE OF NEW YORK
DEPARTMENT OF HEALTH

received
10/24/03
KJ

Antonia C. Novello, M.D., M.P.H.,Dr. P.H.
Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

October 24, 2003

Food Guide Pyramid Reassessment Team
USDA Center for Nutrition Policy and Promotion
3101 Park Center Drive
Room 1034
Alexandria, VA 22302

Dear Sir or Madam:

Thank you for the opportunity to provide comments on the proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid. As Director of the Child and Adult Care Food Program I would like to submit the following comments:

1. **Appropriateness of using sedentary, referenced sized individuals in assigning target calorie levels:**
   - When looking at Table 2 and Table 3 in an overall view, three distinct calorie levels become apparent using a 600 calorie range:
     - Level 1 – Children 2-8 = 1000-1600 calories
     - Level 2 – All females and older Americans (>50) = 1600 – 2200 calories
     - Level 3 – Males 14-50 = 2200 – 2800 calories

     These three levels could be subsets of the food patterns and could be used to develop consumer materials. All people usually fit into one of the three but if you are very active or pregnant, you might add 200-400 Calories.

2. **Appropriateness of the selection of nutritional goals for the daily food intake patterns:**

   - It is important that these goals be communicated in language people will understand. If foods that are high in desired nutrients are the ones given the major emphasis, the message that they are contributors to a more healthful diet will come across.
   - Consumer materials should be focused on balance and variety with special emphasis on the best food choices during times of growth, such as childhood. Specific recommendations for consumer materials include:
     - A separate Food Guide Pyramid for children.
     - Pictures of foods used in consumer materials should represent recommended portion sizes.
     - Include some reference to trans fats to reflect new labeling requirements.
     - There should be a clear understanding that the range of number of servings is based on age, gender, and physical activity level.

2002
Culver

3. **Appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns:**

- Educating Americans is the primary purpose for having this information, the translation to consumers is critical. The Groups should be more nutrient -based. The increased amounts of whole grains, dark-green leafy vegetables, legumes and fruits are consistent with chronic disease prevention. The translation of these food intake patterns to Americans is critical. Emphasis should be on low-fat choices in each food group.

The Fruit/Vegetable group giving high emphasis on more nutritious fruits and vegetables. Recommend that all consumption should be of this type in the lower calorie groups.
The Protein-Rich Foods Group giving emphasis to low fat choices, beans, fish, eggs and meat is last, eliminating the "MEAT" group.
The Calcium-Rich Foods Group giving emphasis to low fat/no fat choices, i.e., calcium enriched soy, yogurt, and milk and cheese (maybe list only low fat cheese as a choice)
The Whole Grains Group giving little recommendation to not choosing whole grains

Eliminate the Added or Additional Group. Putting additional fats and added sugars in a group on their own is misleading and may appear to some as recommending the use of "additional" items. Consumer may get the message to add butter to a potato or add sugar to coffee. If coffee, candy, soda and butter are not going to appear as "foods in the groups" then leave this "Added" group out. Common cooking practices, processing practices and seasoning practices are going to exceed these "added or additional" recommendations.

4. **General Comments:**

- The nutritional goals for the proposed daily food intake patterns are appropriate for professional use. These goals must be communicated in language that people will understand. If foods that are high in desired nutrients are given the most emphasis, the message that they are important contributors to a more healthful diet will come across.

- We recommend the use of cups and ounces, rather than "servings" to suggest daily amounts from each food group. There is tremendous confusion between "serving" and "portion." When cups or ounces are not appropriate, portion sizes should be related to common object sizes, such as the palm of a hand or deck of cards.

Meeting the dietary needs of Americans is clearly a challenge. With the rise in obesity in all age groups we must strive to shift the current eating and physical activity patterns contributing to this rise. We appreciate the opportunity to contribute to this process and anxiously await the final product.

Sincerely,

Jeanne Culver

Jeanne Culver, R.D.
State Director, New York State
Child and Adult Care Food Program

198 1

AMERICAN MUSHROOM INSTITUTE

Phelps

October 27. 2003

received
10/24/03
KT

Eric J. Hentges, Ph.D.
Executive Director
Food Guide Pyramid Reassessment Team
USDA Center for Nutrition Policy and Promotion
3101 Park Center Drive, Room 1034
Alexandria, VA 22302

Dear Dr. Hentges:

On behalf of the American Mushroom Institute, the national trade association that represents American mushroom growers and processors, I would like to wholeheartedly support the comments filed by Mary Jo Feeney, nutrition consultant to the Mushroom Council, regarding the Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data. The Mushroom Council operates the federally authorized research and information program for the mushroom industry.

As noted in her comments, "Now is the time to capitalize on forecasted food trends and customize the Food Guide Pyramid to include a greater variety of food choice options based not only on food group nutrient profiles, but also on how consumers choose to use foods to help them meet the Dietary Guidelines. Mushrooms are a "bridge" food – a food consumers can and do use to transition to food patterns that help lower their intake of calories, total fat, saturated fat and cholesterol."

We urge you as you update the Food Guide Pyramid to seriously consider the suggestions included in the Feeney letter for the Reassessment Team:

- Review nutrient profiles of foods such as mushrooms that do not neatly fit into existing food grouping systems.
- Discuss and develop a mechanism for mushrooms to be better recognized/used in food grouping systems. A precedent has been established for legumes in the Food Guide Pyramid. Legumes can be counted either as vegetables (in the legumes subgroup) or in the meat and beans group once the 2 to 7 ounce equivalents of all meat, poultry, fish, eggs, nuts and seeds has been met. Perhaps similar consideration - or a distinctively different consideration - might be given to mushrooms.
- Include and reference mushrooms in the illustrative and supplemental consumer educational materials developed to interpret and help Americans implement the Dietary Guidelines.

Sincerely,

Laura Phelps

Laura Phelps
President

Mary Jo Feeney MS, RD, FADA
Consultant to the Food and Health Care Industries

1903 Feeney

received
10/24/03
KT

October 24, 2003

Eric J. Hentges, Ph.D. Executive Director
USDA Center for Nutrition and Policy Promotion
Food Guide Pyramid Reassessment Team
3101 Park Center Drive, Room 1034
Alexandria, VA 22302

Re: Proposed Daily Food Intake Patterns for the Food Guide Pyramid

Dear Dr. Hentges:

As the Reassessment Team evaluates the derivation and use of the Daily Food Guide Intake Patterns to identify the types and variety of foods suggested that Americans eat for health, I urge the Team to give serious consideration to foods such as mushrooms that do not fit into neat food grouping systems, but nevertheless play an important role in helping consumers meet the Dietary Guidelines. Although typically used as a vegetable [USDA's Economic Researach Service (ERS)], and occasionally as an alternative to meat (see discussion below) mushrooms are fungi — in a class of their own, nutritionally speaking.

As consumers learn more about the relationship between their food choices and health, food use and consumption patterns change. According to USDA's ERS, consumption of mushrooms has been on the rise in the United States over the past several decades. Per capita consumption of the cultivated fungus crop has quadrupled since 1965. Per capita use of mushrooms (on a fresh weight basis) totaled about 3.94 pounds in 2001 compared to about 0.69 pounds in 1965.[i] According to this ERS report that cites CSFII data, on any given day, 10 percent of Americans eat mushrooms in some form. Trend commentator Faith Popcorn noted that the portabella mushroom went from "produce section obscurity to near ubiquity in culinary record time."[ii]

Now is the time to capitalize on forecasted food trends and customize the Food Guide Pyramid to include a greater variety of food choice options based not only on *food group nutrient profiles*, but also on how consumers *choose to use foods* to help them meet Dietary Guidelines. Mushrooms are a "bridge" food – a food consumers can and do use to transition to food patterns that help lower their intake of calories, total fat, saturated fat and cholesterol. According to foodservice reports, restaurants are offering patrons meatless entrée options and portabella burgers are popular. According to the Chain Account Menu Survey from June 2002 to June 2003 portabella usage on the Top 200 chain menus increased 40 percent in entrees and 33 percent in sandwiches. When compared to total

mushrooms, portabellas remain strong in vegetarian and multi-protein entrees and have gained 64 percent in beef entrees.

A series of simulations conducted by Block Dietary Data Systems (Berkeley, CA) demonstrated the potential benefits of using mushrooms to replace foods higher in calories, fat and cholesterol. The analysis used NHANES III data to determine the potential calorie savings, weight loss, and fat and cholesterol savings if individuals were to substitute mushrooms for specific meats (ground beef, meat on pizza, or for a portion of steak) every time they ate these foods for one year. Assuming no caloric compensation from other foods, if males substituted a 4-ounce grilled portabella mushroom for a 4-ounce grilled beef patty every time that they ate a grilled beef patty for one year, they would experience an annual calorie savings of 18,400 calories, or a potential weight loss of 5.3 pounds. Such a substitution could also result in a reduction of 2,725 grams of fat and 13,336 milligrams of cholesterol. If female pizza eaters substituted a quarter cup of sautéed mushrooms for one ounce of pepperoni and/or sausage on pizza, they would save 5,914 calories, 496 grams of fat and 2,989 mgs of cholesterol a year, with a potential weight loss of 1.7 pounds.[iii] These simulations illustrate the potential impact of small changes over time – certainly an encouraging message for consumers.

In addition to helping consumers "bridge" to lower calorie food patterns, mushrooms provide nutrients that bridge more than one food group. According to USDA's National Nutrient Databank for Standard Reference Release 16 (based on a Nutrition Facts serving, 85 grams, raw) white button mushrooms are a "good source" (10% Daily Value) of niacin, pantothenic acid, copper and selenium; and an excellent source (20% Daily Value) of riboflavin. Mushrooms contain "meat-associated" nutrients: selenium, copper and niacin, and provide more selenium, an antioxidant nutrient, than other fruits and vegetables in the produce category. The National Cancer Institute is investigating the role of selenium in prostate health in a randomized, double blind, placebo-controlled prevention trial involving 32,000 men at 400 sites.

Like some other fruits and vegetables, mushrooms provide potassium (about 270 mgs per 85 gram Nutrition Facts serving) and have compounds that may reduce the risk of cancer. Studies conducted over the past 30 years — mostly in Asia — have provided data suggesting that mushrooms or substances extracted from mushrooms may aid in the treatment of certain types of cancer, boost the immune system and reduce the risk of coronary heart disease. Mushrooms contain a wide variety of bioactive molecules including terpenoids, steroids, phenols, nucleotides, glycoproteins and polysaccharides. Much of the work on the anti-tumor activity of mushrooms has concerned the polysaccharides, which appear to be potent anti-tumor-active compounds.[iv]

Studies at the City of Hope National Medical Center and Beckman Research Institute, Duarte, CA, suggest that white button mushrooms contain substances that *in vitro* inhibit aromatase, an enzyme used in the production of estrogen, believed to have breast cancer-promoting effects in post-menopausal women[v]. Recently, an NCI clinical trial was halted early because of the positive results of

3 of 3
Feeney

the use of the drug letrozole in reducing the risk of cancer recurrence when taken after five years of tamoxifen therapy. Letrozole works by limiting the ability of the enzyme aromatase to produce estrogen.[vi]

In summary, based on mushrooms' unique nutrient composition and increasing use as a simple and practical way to transition to lower calorie, low fat food choices, I request that the Reassessment Team:

- Review nutrient profiles of foods such as mushrooms that do not neatly fit into existing food grouping systems.
- Discuss and develop a mechanism for mushrooms to be better recognized/used in food grouping systems. A precedent has been established for legumes in the Food Guide Pyramid. Legumes can be counted either as vegetables (in the legumes subgroup) or in the meat and beans group once the 2 to 7 ounce equivalents of all meat, poultry, fish, eggs, nuts and seeds has been met. Perhaps similar consideration - or a distinctively different consideration - might be given to mushrooms.
- Include and reference mushrooms in the illustrative and supplemental consumer educational materials developed to interpret and help Americans implement the Dietary Guidelines.

For more information on mushroom nutrition research, please feel free to contact me.

Sincerely,

Mary Jo Feeney

Mary Jo Feeney, MS, RD, FADA
Nutrition Consultant, Mushroom Council

---

[i] Lucier G, Allshouse J, Lin BH. Factors affecting U.S.mushroom consumption. United States Department of Agriculture Economic Research Service Electronic Outlook Report. www.ers.usda.gov. VGS 295-01, March, 2003; 1-11.

[ii] Popcorn F, Hanft A. *Dictionary of the Future.* Hyperion, NY, 2001, 177.

[iii] Block Dietary Data Systems. *Mushrooms: More than just another fungus*, February 2003. Unpublished report to the Mushroom Council, Dublin CA.

[iv] Borchers AT, Stern JS, Hackman RM, Keen CL, Gershwin ME. Mushrooms, tumors, and immunity. *Proc Soc Exp Biol Med.* 1999;221:281-93.

[v] Grube BJ, Eng ET, Kao Y-C, Kwon, A, Chen S. White button mushroom phytochemicals inhibit aromatase activity and breast cancer cell proliferation *J Nutr.* 2001; 131:3288-3293.

[vi] New Treatment Significantly Improves Long-term Outlook for Breast Cancer Survivors. www.nci.nih/gov posted Thursday, October 9, 2003.

184
Kulik

received
10/24/03
KT

ROSALYN FRANTA KULIK, MS RD FADA

22 October, 2003

Food Guide Pyramid Reassessment Team
USDA Center for Nutrition Policy and Promotion
3101 Park Center Drive
Room 1034
Alexandria, VA 22302

Dear Reassessment Team:

As a nutrition educator and an adjunct nutrition faculty member at the University of Tampa, I teach both adults and traditional college students the fundamentals of normal human nutrition. The current Food Guide Pyramid is an obvious, although impractical, teaching aid.

During a hands-on evaluation of this graphic tool, students quickly discover serious limitations when they try to apply the Food Guide Pyramid for their own use. I ask students to translate one day's food diary into the language of the Food Guide Pyramid. Initially, the exercise sounds sophomoric. But invariably, a student asks, "What about pizza?" Others wonder about iced tea, coffee, or water. Occasionally, students ask where they should categorize beans. Vegan students complain about the dairy group. Still others argue that, based on their nutritional profile, potatoes belong in the "grain" group rather than the "vegetable" group. Through the years, the list of specific questions and concerns grows longer. To that end, I recommend six concepts that would necessitate changes to the Pyramid. I chose to substantiate my suggestions with references that are readily available to my students, even though most are secondary sources.

1. **Give fluids a place of predominance in the Food Guide**. Water is one of the six classes of essential nutrients. We live longer without food than we can without water because the body's ability to conserve water is poor.[1] Too little emphasis is placed on the importance of proper hydration. The Reassessment Team must not miss this opportunity to stress the importance of adequate fluid consumption.

- Proper hydration is a key to health and peak performance.[1,2] Performance and endurance parameters begin to decline when fluid loss represents only 1% of a person's body weight.[2] Too often, students are surprised to learn that the urine of a properly hydrated person is no darker than the color of straw.[1]

2094
Kulik

- The sense of thirst is a lagging indicator of proper hydration.[1,2] One starts feeling thirsty when fluid loss nears 2% of the body's weight.[2,3] Already, performance is deteriorating.
- Seniors have the potential to become dehydrated as bladder control weakens, urine output increases, and the sense of thirst diminishes.[4,5] Too often, elders and their caregivers fail to recognize the importance of proper hydration.
- Complications associated with dehydration are ongoing concerns among the physically active and the elderly.[6]
- Low-calorie or non-caloric fluids can help persons who are trying to maintain or lose weight feel satiated.[7]
- If a person confuses the sense of thirst for hunger, the person may overeat, which can contribute to the increased energy intake that has been documented in recent decades.[8,9]

2. **Establish portions that are realistic and compatible with nutrition labeling**. Portion distortion is one factor that may contribute to the nation's overweight condition. The Food Guide Pyramid servings are not always realistic.

- Servings of grain-based foods are particularly small, apparently so the base of the pyramid would have the greatest number of servings.[10]
- Conversely, students react negatively when they measure a huge 2-cup "serving" of cottage cheese into a bowl![11]
- The suggestion in the September 11, 2003 *Federal Register* Notice of using cups/ounces instead of servings has merit. Unless the Pyramid "servings" align with those that the Food and Drug Administration requires on Nutrition Facts panels, consumers will be confused.[12]
- The Notice posed the question about translating slices of bread into cups. A change of nomenclature is in order. Perhaps a "point" or "unit" system – or a variation of an "exchange" list – could be implemented.[13] One "unit" could be the equivalent of ½ cup or 4 fl. oz., 1 piece, or other logical household unit. Importantly, the precise language must differ from the Nutrition Facts labeling so the terminologies would not conflict with one another.

3. **Acknowledge health-promoting fats**. Ever since the "anti-fat" Food Guide Pyramid was first conceived, researchers continue to elucidate diverse qualities of dietary fat.[14] Not all lipids need to be avoided.

- No longer should a person minimize dietary fat as if it were "poison." Experts currently recommend that at least 20% (and up to 35%) of one's food energy should be from fat.[14]
- Foods containing monounsaturated and omega-3 fatty acids are considered health-promoting. However, beneficial fats like olive and flax seed oils appear on the "use sparingly" apex of the current Food Guide Pyramid.
- Spreads that are fortified with plant sterol or stanol esters also sit at the top of the present Pyramid. Suggesting that such fats be eaten only occasionally conflicts with the Food and Drug Administration's health claim acknowledging the fortified spreads' role in helping reduce one's risk of heart disease.[15]

3994
Kulik

4. **Encourage diets rich in color and texture.** Menus with varying colors and textures contribute more than eye-appeal to mealtime.

- Many pigments are phytochemicals that impart health benefits beyond basic nutrition.[16,17]
- Incorporating foods with varied textures – such as whole grain foods, nuts, and fresh produce – add phytochemicals and dietary fiber to the diet.
- Menus with diverse colors and textures reinforce variety, a basic tenet of a sound, nourishing diet.

5. **Highlight foods with high nutrient densities**. Regardless of age or stage of life, persons should be encouraged to choose foods that deliver important levels of micronutrients when compared with the foods' caloric contributions.[18]

- Since Americans' caloric needs continue to dwindle in response to our less active lifestyle, it becomes a greater challenge to ingest adequate micronutrients without becoming overweight.
- It is difficult to get adequate levels of vitamins and minerals when one's energy intake falls below 1,600 kcal per day.[19] Partially for this reason, experts now recommend that we get at least 60 minutes of moderately intense activity daily in order to ingest adequate micronutrients from food without gaining excess weight.[14]

6. **Feature foods with low caloric densities**. Foods high in dietary fiber or water content have low caloric densities.[20]

- Foods that are high in dietary fiber are health-promoting that warrant special attention. The dietary fiber intake of the average American consumer is less than half of experts' recommendations, yet evidence indicates that fiber-rich foods help reduce the risk of our population's major chronic diseases.[14,21,22]
- The first recommendation in this letter addresses the importance of water.
- Dietary fiber and water aid satiety without providing energy. Dr. Barbara Rolls' research in this area led to the development of the "volumetrics" weight management approach that now appears in the popular press.[7]

Sincerely,

Rosalyn Franta Kulik

Rosalyn Franta Kulik, MS RD FADA

404
Kulik

[1] Wardlaw GM. *Contemporary Nutrition: Issues and Insights*, 5th Edition. New York: McGraw-Hill. 2003, p 291. ISBN: 0-07-286530-X.
[2] Gisolfi CV and DR Lamb, eds. *Perspectives in Exercise Science and Sports Medicine, Volume 3: Fluid Homeostasis During Exercise*. Carmel, IN: Brown & Benchmark. 1990. ISBN: 0-697-14816-5.
[3] Wardlaw GM. *Contemporary Nutrition: Issues and Insights*, 5th Edition. New York: McGraw-Hill. 2003, p 295. ISBN: 0-07-286530-X.
[4] Boyle MA and SL Anderson. *Personal Nutrition*, 5th Edition. Belmont, CA: Wadsworth/Thomson Learning. 2003, p 360. ISBN: 0-534-55868-2.
[5] USDA. More than one in three older Americans may not drink enough water. In *Nutrition Insights*, September 2002. Accessed from http://www.usda.gov/cnpp/Insights/insight27.pdf on October 21, 2003.
[6] Wardlaw GM. *Contemporary Nutrition: Issues and Insights*, 5th Edition. New York: McGraw-Hill. 2003, pp 401-403, 520, 523. ISBN: 0-07-286530-X.
[7] Barnett RA and BJ Rolls. *The Volumetrics weight-control plan: feel full on fewer calories*. Harpercollins. 2003.
[8] Plut K. The forgotten nutrient. In *The Tufts Daily*, April 24, 2003. Accessed from http://nutrition.tufts.edu/consumer/balance/2003-04/water.html on October 21, 2003.
[9] Smiciklas-Wright H, Mitchell DC, Mickle SJ, Goldman JD, & Cook A. Foods commonly eaten in the United States, 1989-1991 and 1994-1996: Are portion sizes changing? *J Am Diet Assoc 103*:41-47, 2003.
[10] USDA. Serving sizes in the Food Guide Pyramid and on the the Nutrition Facts label: What's different and why? In *Nutrition Insights*, December 2000. Accessed from http://www.usda.gov/cnpp/Insights/Insight22.PDF on October 21, 2003.
[11] USDA, Center for Nutrition Policy and Promotion. *The Food Guide Pyramid*. Home and Garden Bulletin Number 252. Accessed from http://www.usda.gov/cnpp/pyrabklt.pdf on 21 October, 2003.
[12] Code of Federal Regulations 21, §101.12. Reference amounts customarily consumed per eating occasion.
[13] American Diabetes Association. *Meal Planning Exchange Lists*. Accessed from http://www.diabetes.org/health/nutrition/exchanges/exchangelist.jsp on 21 October, 2003.
[14] Institute of Medicine. Food and Nutrition Board. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. September 2002. Summary accessed from http://www.iom.edu/includes/dbfile.asp?id=4154 on October 21, 2003.
[15] Code of Federal Regulations 21, §101.83. Health claims: plant sterol/stanol esters and risk of coronary heart disease (CHD).
[16] Wardlaw GM. *Contemporary Nutrition: Issues and Insights*, 5th Edition. New York: McGraw-Hill. 2003, p 35-36. ISBN: 0-07-286530-X.
[17] Boyle MA and SL Anderson. *Personal Nutrition*, 5th Edition. Belmont, CA: Wadsworth/Thomson Learning. 2003, pp191-197. ISBN: 0-534-55868-2.
[18] Wardlaw GM. *Contemporary Nutrition: Issues and Insights*, 5th Edition. New York: McGraw-Hill. 2003, p 35. ISBN: 0-07-286530-X.
[19] Wardlaw GM. *Contemporary Nutrition: Issues and Insights*, 5th Edition. New York: McGraw-Hill. 2003, p 48. ISBN: 0-07-286530-X.
[20] Wardlaw GM. *Contemporary Nutrition: Issues and Insights*, 5th Edition. New York: McGraw-Hill. 2003, p 37. ISBN: 0-07-286530-X.
[21] Boyle MA and SL Anderson. *Personal Nutrition*, 5th Edition. Belmont, CA: Wadsworth/Thomson Learning. 2003, p 358. ISBN: 0-534-55868-2.
[22] McCarthy MJ. "Missing ingredient in American Diet," *The Wall Street Journal*. October 22, 2003, p B-1,4.

1002 11cd A

UNIVERSITY OF CALIFORNIA, BERKELEY

received 10/24/03 KT

COLLEGE OF NATURAL RESOURCES
DEPARTMENT OF NUTRITIONAL SCIENCES AND TOXICOLOGY

October 20, 2003

Food Guide Pyramid Reassessment Team
USDA Center for Nutrition Policy and Promotion
3101 Park Center Drive, Rm 1034
Alexandria, VA 22302

Dear Team Members,

As a nutrition educator with over 35 years of experience working with consumers, it is my professional opinion that providing additional information to the public regarding use of the food guide pyramid is unwarranted. Research does not demonstrate that providing people with more information, particularly complex information that is difficult for them to understand and implement, motivates or supports behavioral change. The Food Guide Pyramid was designed to be a simple tool that the average consumer could use as a guide to obtaining an adequate to optimal diet. Adding complex information about calorie needs and activity levels will make this food guide much less user friendly.

There is also the potential for this focus on caloric intake to "backfire" by promoting restrained eating and constant dieting. For over 50 years, nutritionists and dietitians have promoted calorie restricted diets as a means of "preventing" and "treating" obesity. The majority of girls and women in the country have taken this advice to heart and are constantly dieting. And for those same 50 years obesity rates have skyrocketed. At what point will we finally admit that calorie restriction is not the answer to preventing and treating obesity, and might actually be contributing to the problem?

The common joke about dietitians is that if you ask any one of us what time it is, we cannot simply state the time, but have to tell the inquirer how to build a clock. This detailed elaboration of the food guide pyramid is a perfect example of that - our inability to limit our messages to the promotion of key behaviors which will improve the nutritional well-being of the majority of the populace.

The Food Guide Pyramid, as it stands, promotes the concept that nutrients are found in a wide variety of foods, and that in order to be well nourished, people need to eat a wide variety of foods. The more limited the diet becomes, the greater the risk of nutritional inadequacy. We should value the food guide because it gets across this very important message about the need for dietary diversity.

2092
Ikeda

The food guide pyramid already promotes moderation by defining standard serving sizes. The fact that people are eating much larger serving sizes is not because they are following the Food Guide Pyramid - it is because they are NOT following the pyramid.

Why are we trying to change the Food Guide Pyramid into yet another set of dietary guidelines? The U.S. Dietary Guidelines provide detailed information about recommended patterns of eating. Why can't the Food Guide Pyramid remain what it was designed to be - a simple tool that is easily understood by most individuals?

As for the Food Guide Pyramid actually contributing to the onset of obesity, a notion fostered by nutritionists who shall remain unnamed, there is absolutely no research to support this contention. The problem is that people are NOT eating according to this food guide. Making it more complex and difficult to use is not the answer to changing the food and activity habits of consumers.

The idea that providing consumers with more information will motivate them to improve their dietary intake, is naïve; it ignores an entire body of research on motivating and supporting behavioral change. If we really want to help consumers to eat healthier diets, we need to focus on designing programs and messages that accomplish this goal. Making messages more complex and difficult to understand will only create additional barriers to these changes.

Sincerely,

Joanne P. Ikeda, MA, RD
Cooperative Extension Nutrition Education Specialist

October 21, 2003

1991 Mattson

received 10/24/03 KJ

Food Guide Pyramid Reassessment Team
USDA Center for Nutrition Policy and Promotion
3101 Park Center Drive
Room 1034
Alexandria, VA 22302

I am aware that you have received technical comments from the National Barley Foods Council (NBFC) concerning the proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid.

If it were not for my association with organizations such as NBFC and WFC, I, as a consumer, would not be aware of the benefits of barley in our diet. As consumers we look to the USDA and its recommendations through the Food Guide Pyramid to sway our eating choices. You would be doing the public a favor by including barley as one of the whole grains that benefits us all.

As you examine the information provided you by the National Barley Foods Council and the research done by several organizations, please don't leave out the importance of barley in our diets.

Sincerely,

Janice C. Mattson

Janice C. Mattson
Montana Producer

Jean Mayer
United States Department of Agriculture
Human Nutrition Research Center on Aging
At Tufts University

received
10/24/03
KT

109 Tucker

October 14, 2003

Dear Food Guide Pyramid Reassessment Team,

This letter is in response to the USDA's technical report on Daily Food Intake Patterns and Technical Support Data. The continued commitment to providing dietary guidance to promote healthful eating in the United States is of great importance and with substantial new research available on diet and health; this reassessment of the food guide pyramid is timely. Recently, the DRI for vitamin E was changed, based on research that suggests that alpha-tocopherol in the natural form is the preferred form of vitamin E for the human body. It is therefore surprising to see that the decision for the Food Guide Pyramid reassessment was to lower the target for vitamin E consumption, based on the perception that meeting the RDA would require 'substantial changes from typical intakes and would require use of foods not commonly consumed.

Americans are clearly not meeting the current recommendations for vitamin E—consuming only about one-half to two-thirds of the recommended 15 mg of alpha-tocopherol, on average. In a recent study that is in press at the Journal of the American Dietetic Association, we determined that most consumers are obtaining their daily vitamin E from relatively poor sources of alpha-tocopherol, including oils and baked products. We concluded that the use of more rich sources of alpha-tocopherol, such as nuts and seeds, needs to be encouraged if more Americans are to reach their vitamin E intake goal.

The current version of the guidelines encourages consumption of dark green vegetables, legumes and oils to increase vitamin E intake. While these foods contain vitamin E, it is indeed difficult to achieve DRI intake levels from them. In contrast, several types of nuts and seeds, such as almonds and sunflower seeds, contain sufficient amounts of alpha-tocopherol to achieve DRI recommendations with reasonable intake levels. It would seem, therefore, that the public would be best served by suggesting greater inclusion of these sources in the diet, so that individuals can move toward achieving the DRI for vitamin E from foods.

Respectfully submitted,

Katherine Tucker

Katherine Tucker, PhD
Associate Professor of Nutritional Epidemiology

1001-A
Churchill C.S.

received
10/24/03
KT

October 16, 2003

USDA Center for Nutrition Policy and Promotion
3101 Park Center Drive, Room 1034
Alexandria, VA 22302

Dear Food Guide Pyramid Reassessment Team:

Our class of seventh graders from Churchill School in New York City did a project on how we could improve the old food pyramid, here are some of our ideas. First, we think that liquids, especially water, are important to our health because it is important to stay hydrated. Therefore we think that liquids should either be added to the pyramid or at least be addressed somewhere on the guidline sheet.

Our second suggestion is that you make multiple pyramids for different age groups (young children, adolescents, adults) and people with different diets (vegetarians, vegans, etc.).

We also think it would be easier to follow the food pyramid guidelines if the servings were measured in cups and/or ounces. The current serving suggestions are not clear.

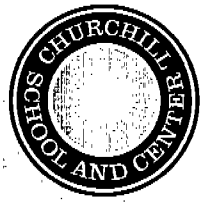
Our last suggestion is to include less grains in the pyramid because a lot of foods that are considered grains have too much starch and a lot of calories. Too many calories are not good for our bodies.

Thank you for your time; we appreciate you letting us contribute our suggestions. Please respond to our suggestions.

Sincerely,

Will Hertzman, Willzimmermann
Alexandra Torres
Madeline Heller-Arrow
Tori Pisbin
Diana Golfarini
Gregory Quinlan
Frank Pastale
Andrew Estrada
Sophie Glassman
Samuel Blake
Wolgemuth
Alexis Aliperta
PAPAZOGLOU

1 of 1
Churchill-6
sc.



received
10/24/03
TCT

October 21, 2003

USDA Center for Nutrition Policy and Promotion
3101 Park Center Drive, Room 1034
Alexandria, VA 22302

Dear Food Guide Pyramid Reassessment Team:

We are a seventh grade class of students from The Churchill School and Center. In our science class we were learning about the food pyramid and we would like to give you some suggestions about how to change the current food pyramid.

Our first suggestion is that you should make all servings into measurements like cups and ounces because this would make the pyramid easier to follow. We also think there should be less servings per day overall but more of the servings per day should come from vegetables.

Another suggestion is that you should separate fish from the meat category because, in general, fish have less fat. Poultry should also be in a separate category because it also has less fat than red meat.

Our last suggestion is to make different pyramids for different ages. Young people are still growing; they need more servings than people who are older and not growing anymore.

We think these suggestions will make the food pyramid better. Thank you for listening to our ideas.

Sincerely

Jesse Medalia-Strauss

Elizabeth C. Verrick

Kaleb Thorning Wiese

Ross Giattino

Ashley

Rachel Greenhoe

Austin Steckman

K-The Greek

Jacob Federman

MiKE

Arbitter

AACC

Advancing grain science worldwide

1906 Dexter

received 10/24/03

KT

President
James Dexter
Canadian Grain Commission

President-Elect
George Lookhart
USDA ARS US Grain
Marketing Research Lab

October 21, 2003

Food Guide Pyramid Reassessment Team
USDA Center for Nutrition Policy and Promotion
3101 Park Center Drive, Room 1034
Alexandria, VA 22302

Dear Food Guide Pyramid Reassessment Team:

We, the American Association of Cereal Chemists Board of Directors, are writing to you with scientific data in support of grains at the base of the Food Guide Pyramid (hereafter referred to as the Pyramid). AACC is the premier worldwide organization for advancing grain science and technology by creating, interpreting, and disseminating cereal information to our 3,000 plus members throughout the world.

In this letter we will cover several key areas in relating this support.

1. **Grains have historically been at the base of the Pyramid and as such should remain there.**
2. **Obesity is due to too many calories of all types and too little energy expenditure.**
3. **Dietary advice for the nation as a whole should be devised for healthy, normal-weight people. The Food Guide Pyramid is no exception.**
4. **The problem with the U.S. diet is not the Pyramid itself; it is that people do not follow the Pyramid and do not follow the guidelines with respect to recommended portions.**

Grains have historically been at the base of the Pyramid and as such should remain there.

Cultures, ancient and modern and in developed and developing nations, all have a carbohydrate staple, often a grain-based food, that has nourished peoples over time. Each staple, while unique, provides the population with the bulk of its energy as well as numerous important nutrients.

Ancient texts have praised carbohydrate staples that are eaten the world around. Old Testament writings talk of manna from heaven; New Testament texts suggest breaking bread together and speak of the bread of life and living not by bread alone. Jewish hallah bread takes pride of place for a Sabbath meal and unleavened bread for a Seder meal. Asians ask one another if they have eaten by

2006 Dexter

saying, "Have you had rice?" Corn and wild rice were considered by native tribes as gifts of an important god or from the Great Spirit.

Chronicles of early pioneer life suggest that it would be customary to bake as many as 13 loaves of bread for a large farm family. Early American songs sing of hasty pudding (corn meal mush.) Thus, the cultural melting pot and framework of the current American diet is based on breadstuffs and grains that incorporate the variety of cultural traditions. These various grain-based foods are a cornerstone of the diet.

Grain-based staples provide an array of B vitamins, a number of important minerals, and all-important dietary fiber. With these important nutritional contributions, it is no wonder that health and government organizations around the world, together with expert consultative committees such as those convened by the WHO/FAO, recommend that the bulk of the calories come from carbohydrates, particularly in the form of tuber- and grain-based food products. Thus, most recommendations from these bodies suggest that at least 45% of calories come from carbohydrates and most recommend that 55-60% of calories come from carbohydrate.

Grains, especially whole grains, offer tremendous dietary advantage. Numerous epidemiological studies have shown that the inclusion of whole grains in the diet is associated with reduced risk of a variety of chronic diseases, including heart disease,[1,2] certain types of cancer,[3] diabetes[4,5], and stroke,[6] as well as overall mortality.[7] For most of these diseases, risk reduction was 25% or greater for those ingesting somewhere between two and three servings of whole grain each day. Even waist circumference and body mass index (BMI) were affected by whole grains.[8,9,10,11] Since the average American eats less than one serving of whole grain per day, it is critical that grains and whole grains be emphasized in the Pyramid.[12]

Grains at breakfast and the inclusion of breakfast cereals in the diet are shown in study after study to provide many important B vitamins and minerals to children who eat breakfast. A recent study comparing breakfast patterns of adolescents once again showed that a ready-to-eat cereal breakfast provided significantly more folic acid, iron, niacin, vitamins A and D, and zinc, per dollar spent, than fast food or traditional breakfasts other than cereals.[13] These data are in line with a number of past studies, including the 25-year-long Bogalusa Heart study (n = 1254) and continue to document the importance of fortified cereals in making nutrient contributions to the diets for a large number of children and adolescents.[14]

An analysis of the contribution of fortified cereals to the diets of adults, using data from the USDA Consumer Survey of Food Intake of Individuals (CSFII), showed that, in numerous cases, fortification was responsible for boosting median or 25th percentile intakes of nutrients from below to above the Recommended Dietary Allowance (RDA). The breakfast cereal category was responsible for nearly all the intake of nutrients from fortified foods.[15] In addition, analysis of data from the National Nutrition and Health Examination Survey II (NHANES II) (n = 11,528 adults) showed that "other" foods (i.e., foods not from the groups meat, dairy, grain, fruit, and vegetable) provided an average 33% total daily energy intake. As foods in the "other" category increased, the number of servings in the food group categories decreased, as did the attendant diet quality.[16]

309 6 Dexter

Recent data on folate fortification of grain products show that, in just five years since fortification was instituted in the USA and Canada, the rate of neural tube defects and some other related birth defects has decreased by as much as 50%.[17,18] Fortification of grains is an ideal vehicle because grains are widely eaten by the population. Further, for prevention of birth defects, it is the folate status of the woman at the time she becomes pregnant that is important.

Folate fortification not only helped to reduce birth defects, it also decreased the heart disease risk factor of high circulating homocystiene. Data collected on the Framingham offspring show a decrease in homocystiene blood levels by 50% over that seen in the population prior to fortification.[19] Folate fortification of grain products shows that these foods provide a platform with which to deliver needed nutrients to the population. Moving grains to a less prominent place in dietary guidance might reduce some of these positive gains seen with the fortification strategies.

Obesity is due to too many calories of all types and too little energy expenditure.

The current obesity epidemic that is occurring in the USA and around the world is sobering. Attending the rise in obesity are increases in the metabolic syndrome (Syndrome X) and Type II diabetes. Some argue that, since traditional dietary advice seems to be incapable of stopping the dramatic rise in these conditions, drastic changes to the diet are needed. Some of the most evangelistic and iconoclastic nutritionists and health professionals have thrown off the ideas of the past. They lay the blame for the obesity epidemic on the eating of too much bread and refined carbohydrate. Consumers, journalists, and best-selling book authors have assured the public that the culprit is sugar and foods containing refined carbohydrate such as white bread and pasta. They argue that as fat intake was decreasing, abdominal fat and weight were increasing. While it is true that the percentage of calories from fat was decreasing, this was true only because the total number of calories was increasing. As a backlash, they argue that all the high-carbohydrate, fat-free food made the population fatter. While there may be some data to support this view, the reason that fat-free food made some people fatter is that there is a general misunderstanding of the word "free." For some consumers, "free" meant that they could ingest as much as they liked. In some cases, the fat-free food did not save the consumer any calories. For other consumers, the diminished taste of the fat-free item left them eating more in a futile attempt to seek the same degree of satisfaction obtained from the higher-fat counterpart.

Numerous studies show that those who eat a high-carbohydrate diet over a lifetime tend to have normal body weights (or BMIs less than 25). Additionally, it was shown that, when the diets of 10,014 U.S. adults over 19 years of age in the CSFII were segmented into four groups based on their carbohydrate intake—very low, low, moderate, and high carbohydrate (55% CHO), those with the highest carbohydrate intake were more likely to have a BMI <25, to meet nutrient recommendations, and to eat a higher volume of food per 1000 cal. [20,21] Many other studies have shown the same relationship. For example, data from the Bogalusa Heart cohort showed that total consumption of low-quality foods, total amount of food consumed, and calories from snacks was positively associated with overweight status.[22] These studies do not pick out breads and pasta as the culprit, but rather the total amount of food and food with little nutritional contribution. Thus, most argue, as was concluded in a recent review,[23] that fat, not carbohydrate

1996 Dexter

and grain-based foods, leads to passive over-consumption and obesity. Fat yields more than twice as many calories per gram, and despite popular myths to the contrary, calories do count.

Calories "out" count, as well as calories "in." Clearly, our twenty-first century lifestyles—complete with people movers, wheeled luggage, and garage door openers—means that we expend fewer calories than we did in earlier times. This lack of caloric expenditure in daily life is exacerbated by the proclivity to sit before some sort of screen, either using a computer or watching television. In either case, the caloric need for the activity is small indeed, and it means that we are not involved in activities that would expend energy and build muscle.

Changing the Pyramid by moving grains from the base will not do what is critical with regard to weight—that is, increase the energy expenditure. Neither will it decrease the size of portions, the number of total calories, or the selection of foods with high caloric yield and low nutrient density.

Dietary advice for the nation as a whole should be devised for healthy, normal-weight people. The Food Guide Pyramid is no exception.

Population dietary recommendations have been based on meeting the needs of healthy people. This strategy was used for the calculations of the RDAs and Dietary Reference Intakes (DRIs), the Dietary Guidelines, and other dietary advice. Recommendations from the upcoming Food Guide Pyramid should not break with this tradition. However, it is mandatory that the Pyramid emphasize exercise and movement.

The problem with the U.S. diet is not the Pyramid itself; it is that people do not follow the Pyramid and do not follow the guidelines with respect to recommended portions.

The Food Guide Pyramid is not the problem. According to CSFII data, only 1% of U.S. children and adolescents and 3% of U.S. adults eat according to the Pyramid.[24] Those who did, met the nutrient requirements.[4]

Consumers are very confused about portions and proper portion size. Further, portion sizes have increased over time. The Pyramid must help consumers understand that it is the combination of portion size and total energy intake and expenditure that is important for maintenance of weight.

Summary—Leave grains at the base of the Pyramid

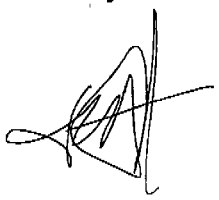
Thus, in closing, we recommend that the overall placement of food groups in the Pyramid remain the same, with the **bread and cereal group as the base**, but that the Pyramid be tweaked in the following ways:

(1) Emphasis on the importance of whole-grain foods
(2) Emphasis on adequate energy expenditure

5P6 Dexter

(3) Graphic help for consumers to help them deal with realistic portion sizes
(4) Help for consumers in selecting lower-calorie items within various categories in order to make choices that will allow them to maintain a healthy weight.

Sincerely,



James Dexter
AACC President

---

[1] Liu S, Stampfer MJ, Hu FB, Giovannucci E, Rimm E, Manson JE, Hennekens CH, Willett WC. Whole-grain consumption and risk of coronary heart disease: results from the Nurses' Health Study. Am J Clin Nutr. 1999 Sep;70(3):412-9.

[2] Jacobs DR Jr, Meyer KA, Kushi LH, Folsom AR. Is whole grain intake associated with reduced total and cause-specific death rates in older women? The Iowa Women's Health Study. Am J Public Health. 1999 Mar;89(3):322-9.

[3] Pelucchi C, Talamini R, Levi F, Bosetti C, La Vecchia C, Negri E, Parpinel M, Franceschi S. Fibre intake and laryngeal cancer risk. Ann Oncol. 2003 Jan;14(1):162-7.

[4] Fung TT, Hu FB, Pereira MA, Liu S, Stampfer MJ, Colditz GA, Willett WC. Whole-grain intake and the risk of type 2 diabetes: A prospective study in men. Am J Clin Nutr. 2002 Sep;76(3):535-40.

[5] Murtaugh MA, Jacobs DR Jr, Jacob B, Steffen LM, Marquart L. Epidemiological support for the protection of whole grains against diabetes. Proc Nutr Soc. 2003 Feb;62(1):143-9.

[6] Liu S, Manson JE, Stampfer MJ, Rexrode KM, Hu FB, Rimm EB, Willett WC. Whole grain consumption and risk of ischemic stroke in women: A prospective study. JAMA 2000 Sep 27;284(12):1534-40.

[7] Lubin F, Lusky A, Chetrit A, Dankner R. Lifestyle and ethnicity play a role in all-cause mortality. J Nutr. 2003 Apr;133(4):1180-5.

[8] McKeown NM, Meigs JB, Liu S, Wilson PW, Jacques PF. Whole-grain intake is favorably associated with metabolic risk factors for type 2 diabetes and cardiovascular disease in the Framingham Offspring Study. Am J Clin Nutr. 2002 Aug;76(2):390-8.

[9] Newby P, Muller D, Hallfrisch J, Qiao N, Andres R, Tucker KL. Dietary patterns and changes in body mass index and waist circumference in adults. Am J Clin Nutr. 2003 Jun;77(6):1417-1425.

[10] Mickelsen O, Makdani DD, Cotton RH, Titcomb ST, Colmey JC, Gatty R. Effects of a high fiber bread diet on weight loss in college-age males. Am J Clin Nutr. 1979 Aug;32(8):1703-9.

[11] Koh-Banerjee P, Rimm EB. Whole grain consumption and weight gain: A review of the epidemiological evidence, potential mechanisms and opportunities for future research. Proc Nutr Soc. 2003 Feb;62(1):25-9.

[12] Cleveland LE, Moshfegh AJ, Albertson AM, Goldman JD. Dietary intake of whole grains. J Am Coll Nutr. 2000 Jun;19(3 Suppl):331S-338S.

[13] Nicklas TA, McQuarrie A, Fastnaught C, O'Neil CE. Efficiency of breakfast consumption patterns of ninth graders: Nutrient-to-cost comparisons. J Am Diet Assoc. 2002 Feb;102(2):226-33.

[14] Nicklas TA, O'Neil CE, Berenson GS. Nutrient contribution of breakfast, secular trends, and the role of ready-to-eat cereals: A review of data from the Bogalusa Heart Study. Am J Clin Nutr. 1998 Apr;67(4):757S-763S.

[15] Berner LA, Clydesdale FM, Douglass JS. Fortification contributed greatly to vitamin and mineral intakes in the United States, 1989-1991. J Nutr. 2001 Aug;131(8):2177-83.

[16] Kant AK, Schatzkin A. Consumption of energy-dense, nutrient-poor foods by the US population: Effect on nutrient profiles. J Am Coll Nutr. 1994 Jun;13(3):285-91.

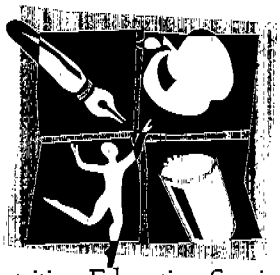
[17] French AE, Grant R, Weitzman S, Ray JG, Vermeulen MJ, Sung L, Greenberg M, Koren G. Folic acid food fortification is associated with a decline in neuroblastoma. Clin Pharmacol Ther. 2003 Sep;74(3):288-94.

[18] Ray JG, Meier C, Vermeulen MJ, Boss S, Wyatt PR, Cole DE. Association of neural tube defects and folic acid food fortification in Canada. Lancet. 2002 Dec 21-28;360(9350):2047-8.

6996 Dexter

[19] Rader JI. Folic acid fortification, folate status and plasma homocysteine. J Nutr. 2002 Aug;132(8 Suppl):2466S-2470S.
[20] Bowman SA, Spence JT. A comparison of low-carbohydrate vs. high-carbohydrate diets: Energy restriction, nutrient quality and correlation to body mass index. J Am Coll Nutr. 2002 21(3):268-74.
[21] Kennedy ET, Bowman SA, Spence JT, Freedman M, King J. Popular diets: Correlation to health, nutrition, and obesity. JADA. 2001, 101:411-20.
[22] Nicklas TA, Yang SJ, Baranowski T, Zakeri I, Berenson G. Eating patterns and obesity in children. The Bogalusa Heart Study. Am J Prev Med. 2003 Jul;25(1):9-16.
[23] Jequier E. Pathways to obesity. Int J Obes Relat Metab Disord. 2002;26 Suppl 2:S12-7.
[24] Munoz KA, Krebs-Smith SM, Ballard-Barbash R, Cleveland LE. Food intakes of US children and adolescents compared with recommendations. Pediatrics. 1997 Sep;100(3 Pt 1):323-9. Erratum in: Pediatrics. 1998 May;101(5):952-3.

1 of 4 Goetze, Leonard, Price



Nutrition Education Services
Oregon Dairy Council

received
10/24/03

October 22, 2003

Food Guide Pyramid Reassessment Team
USDA Center for Nutrition Policy and Promotion
3101 Park Center Drive, Room 1034
Alexandria, VA 22302

To the Team:

Over the past ten years, our staff has conducted countless sessions with thousands of children, teens, adults and seniors using the Food Guide Pyramid (FGP) as our nutrition education foundation. It is with that expertise, along with our professional knowledge and ability to apply research to practical situations that we respectfully submit the following feedback on the Technical Report.

First and foremost, we disagree with those who would argue that the FGP has not done its job. We argue instead that it has become the unfortunate scapegoat for a society that has lost all focus when it comes to balance, variety and proportionality. The technical report speaks to the scope and breadth of the science behind the recommendations. The real need that we see is more nutrition education to support the science and messages of the FGP.

At this time, however, we do offer the following specific comments regarding the technical report:

Proposed Daily Food Intake Patterns

We agree with a food grouping system based on nutritional similarities among foods, their use in meals and consumer perception. Americans have learned to think in terms of simple food groups. By emphasizing the importance of building a good diet based on five nutrient-dense food groups, the FGP reinforces the notion that people eat foods, not nutrients. Maintaining the current groups will assist in efforts to reduce consumer confusion.

The recommendations for "additional fats" and "added sugars" are clearly quantified and provide flexibility in food choices. We have always recommended a "trade-off" or "all foods can fit" approach to managing dietary fat intake. We think consumers

203 Goetze, Leonard, Price

approach to managing dietary fat intake. We think consumers are capable of making these kinds of choice, but will need significant education, especially considering emerging research that will soon allow us to assess an individual's risk for chronic disease, and thereby customize dietary guidance.

We are concerned about the nutritional adequacy of the number of servings from the milk food group. Four groups (males ages 9-13, females ages 9-13, females ages 14-18, females ages 31-50) will not meet calcium the AI for their age with the proposed 2-3 servings of dairy (ref Table 5). The IOM's Applications of Dietary Assessment indicates that if the AI is not met or exceeded, attainment of nutrient adequacy can not be assumed.

The proposed recommendations for all age groups call for additional calcium, beyond the 2-3 milk servings, to come from plant-based sources. We think this is unrealistic based on typical consumption patterns and would contribute to nutrition inadequacy. Suggested amounts of non-dairy calcium sources are:

- 30 – 50% higher than the current FGP recommendations
- 3 – 4 times higher than current consumption by Americans older than age two
- 6 – 8.5 times higher than current consumption by children ages 2- 19

Additionally, the calcium in dark, green leafy vegetables, whole grains and legumes has decreased bioavailability compared to the calcium from dairy foods. (AJCN, 51(4): 656-7, 1990)

The risks of inadequate calcium intake due to recommending only 2-3 servings are well documented. Osteoporosis is major public health threat for an estimated 44 million Americans. Calcium's role in prevention and treatment is well established. Lower calcium intake in children and adolescents is already impacting bone health, with forearm fractures increasing by 42 percent in the past 30 years. (JAMA, 9/03). Additionally, new research has demonstrated a role for milk group foods in the prevention of heart disease (CARDIA, DASH and PREMIER Studies)

One of the stated goals of the proposed changes is to represent "a diet that is both adequate and moderate, as well as to reflect current food consumption choices in determining nutrient sources." A higher number of servings from the milk group (3-4) would support the FGP goals and would be supported by scientific research.

Another area of concern is fortified foods. The 2001 *Position of the American Dietetic Association: Food Fortification and Dietary Supplements* serves as an excellent guide for addressing this important issue:

"*Wise food choices provide the necessary foundation for optimal nutrition. Science has not fully identified the specific chemical components that account for the benefits of healthy eating patterns. Selection of a wide variety of foods, using tools such as the Dietary Guidelines for Americans and the FGP, is the best way to provide a desirable balance, without excess.*"

Goetze, Leonard, Price

Introducing the suggestion of calcium-fortified soy beverages as a substitute for dairy foods is an incomplete recommendation. While intention is to provide a calcium alternative, it must be recognized that the complete nutrient profile of these two foods is completely different. Dairy products are an important source of high-quality protein, Vitamins A, D, B6 and B12, riboflavin, magnesium, zinc, potassium, phosphorus, niacin, and other essential nutrients.

In addition, dairy foods provide numerous other health benefits. Naturally nutrient-rich milk, yogurt and cheese have been shown times to improve the overall nutritional quality of the diet, play a role in preventing hypertension, insulin resistance, and colon polyp recurrence. Selecting dairy foods as part of a typical diet has not been shown to increase total calorie or fat intake, body weight or percent body fat. Emerging research shows that dairy foods may even have additive effect on reduced-calorie, low-fat diets for weight loss.

Soy beverages are often fortified with calcium and Vitamin D to mimic cow's milk. However, the calcium added to soy beverages is absorbed at 75% efficiency compared to cow's milk (AJCN 2000, 71:1166-9). This is not commonly understood by consumers and could lead to more confusion regarding the larger serving size needed for equivalency.

Lactose Intolerance has become an often reported reason to avoid milk group foods. For Americans (including most African Americans) with lactose intolerance, research shows they can still consume dairy products and reap the health benefits (Suarez, et all.) There are also a variety of lactose-reduced and lactose-free milk products readily available today that provide all the nutritional benefits found in traditional dairy products.

Appropriateness of using cups and ounces vs. servings

We completely agree that the term "serving" has been widely misunderstood by consumers. We have addressed this issue by illustrating typical servings in each food group (Pyramid Plus, Nutrition Education Services/Oregon Dairy Council). We urge you to consider some sort of pictorial approach in the new educational materials no matter which approach you choose.

We recommend using total cups or ounces per day to help consumers know the quantity of each food group they need. Americans will be more apt to confidently apply the information to their diet if it matches a product label or corresponds with measuring knowledge that many already know, such as cups or ounces.

While serving sizes are not, and probably won't ever be, standardized among food products and nutrition recommendations, we need to help people navigate with familiar tools.

4084 Goetze, Leonard, Price

The concern of loosing a "variety" message because of a total cups or servings recommendation can be addressed either through a subtitle or in consumer materials. The recommendation of "eating a variety of foods within each food group" is a familiar concept, though needs reinforcement and constant examples. Taking words from the Healthy Eating Index, one suggested message would be "to get the nutrients you need, eat 16 or more different foods during a 3 day time period."

Finally, we applaud you for your excellent and thorough work. We look forward to continued participation in this process and offer our assistance to help yield effective educational tools that will benefit the health and well-being of Americans.

Sincerely,

Anne Goetze

Anne Talbott Goetze, RD, LD
Director

Edie Leonard

Edie Leonard, MS, RD, LD
Nutrition Educator

Penny Price

Penny Price, MS
Nutrition Educator

105 & Kliener

received 10/24/03 KT

GENERAL MILLS

October 24, 2003

Eric Hentges, Director
Food Guide Pyramid Reassessment Team
USDA Center for Nutrition Policy and Promotion
3101 Park Center Drive, Room 1034
Alexandria, VA 22302

RE: **Federal Register Notice, Volume 68, No. 176, September 11, 2003**
Center for Nutrition Policy and Promotion; Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data and Announcement of Public Comment Period

Dear Dr. Hentges:

General Mills is a Delaware Corporation with its general offices at No. 1 General Mills Boulevard, Minneapolis, MN 55426. General Mills is a major, world-wide packaged-food manufacturer engaged for over 60 years in the development and production of food products including flour, ready-eat-cereals, refrigerated dough products, cake and other dessert mixes, soups, vegetables, yogurts, snacks and numerous other products.

General Mills believes the Food Guide Pyramid has been, and can continue to be, an important tool for providing dietary guidance to the American public. Over the years, General Mills has helped provide visibility and understanding of the Pyramid by communicating it on millions of food packages as well as making it an integral part of our educational materials for adults and children.

We plan to continue to provide this support and believe it is important to review and revise the current food guide pyramid, if necessary, to reflect the 2005 Dietary Guidelines as well as the latest scientific standards and advancements. We applaud the USDA for the thorough science-based approach used to address the potential changes and issues that have been raised as a result of this assessment. Addressing the specific questions outlined in the Federal Register Notice, our comments are as follows:

295
Kliener

Appropriateness of using sedentary reference-sized individual in assigning target calorie levels

We believe the calorie levels for Food Guide Pyramid should be targeted to *healthy* Americans. These targets would ensure adequate nutrient intakes and energy levels to *maintain* healthy weight. Thus, using the 'Low active' reference individual for assigning target calorie levels would be most appropriate.

Since the purpose of the Food Guide Pyramid is to provide guidance for good health, the food patterns should not only ensure adequate nutrient intakes, but also represent calorie levels that will support and encourage active, healthy lifestyles. Therefore, using the sedentary referenced- sized individual to assess *nutritional adequacy* seems appropriate; however, it is not appropriate to use it to assess *calorie levels*.

According to the latest national dietary intake survey, NHANES 1999-00[1], the current reported median energy intake of American adult males ages 19+ is 2,427 kcals (mean = 2,601 kcal) and approximately one-third of adult males reported consuming less than 2,000 kcal/day. The median energy intake of American adult women ages 19+ is 1,714 kcals (mean=1,849 kcal) and approximately 1/3 reported consuming less than 1500 kcal/day. This suggests that while adult men may be consuming close to their calorie goals for an active, healthy lifestyle, many women are consuming closer to the sedentary levels.

These current consumptions patterns reinforce the need for incorporating *physical activity goals* as part of the recommendations for healthy food choices and a healthy lifestyle.

[1] National Center for Health Statistics. National Health and Nutrition Examination Survey, 1999-00. Public-use data file and documentation. http://www.cdc.gov/nchs/ nhanes/NHANES99_00.htm. 2003.

Appropriateness of the selection of nutritional goals for the daily food intake patterns

Using a target of 100% of the RDA nutrients (as set by the Institute of Medicine [IOM] in their recent Dietary Reference Intake reports) seems appropriate to assess food patterns for individuals.

Moderation goals

While it may be important to include advice on limiting intakes of trans fat, it will be equally important to balance that message with messages about consuming total fat in moderation, limiting saturated fat intakes and choosing more unsaturated fats and oils.

The amount of trans fat in the diet is much smaller than the saturated fat and therefore it is misleading to put too much emphasis on trans fat. Providing positive messages about choosing a diet with moderate amounts of fat and substituting oils (such as olive or canola oil) for some

395 Kliemer

of the saturated fat in the diet would be a more practical and useful message.

Nutritional goals for total fiber

The goal of 14 grams of total fiber per 1000 calories seems to be a much more practical approach than the recommending the high levels (25-38 grams) set in the IOM report. However, it will be very important to harmonize fiber terminology with the terminology used on the nutrition label and the data currently available in the food composition tables.

Therefore, until the term *total* fiber is incorporated into food labeling and food composition tables, the food guide pyramid fiber recommendation should reflect *dietary* fiber levels.

Nutritional goals for added sugar

Since the recommended food patterns are well below the 25% maximum level set in the IOM report, care should be taken not to imply that these lower levels are recommended levels. Once nutrient needs are met, it is important to allow individuals flexibility in food choices in order to be able to choose a diet that will be palatable and meet their individual preferences.

Appropriateness of proposed food intake patterns for educating the Americans

Since these patterns are goals, it seems appropriate to encourage choosing minimum servings from these foods categories- grains, vegetables, fruit, meat and beans and milk-foods and food patterns that have been demonstrated to ensure adequate intakes of nutrients necessary for good health.

Consistent with the current Dietary Guidelines and the current Food Guide Pyramid, **grains** should continue to make up the base of the pyramid. These foods provide complex carbohydrates, an important source of energy in the diet. They also provide essential nutrients such as thiamin, niacin, riboflavin, folic acid, iron and zinc, fiber and other non-nutrient components beneficial to good health. Widely consumed, economical, convenient, versatile and healthful, grains are the foundation of the American diet and most dietary patterns around the world.

We strongly support the continued emphasis on whole grain and the recommendation that **one half of the grain servings be whole grain** (or at least 3 servings of whole grains daily). Consumption of whole grain will greatly increase intakes of fiber, certain vitamins, minerals and other non-nutrients such as lignans, tocotrienols and other phenolic compounds linked to good health and disease prevention. The 2000 Dietary Guidelines Advisory Committee emphasized whole grain consumption because they recognized the health benefits associated with it. Both epidemiological and clinical research has clearly

495 Wiener

established the role of whole grain as part of a healthy diet in reducing risk for heart disease and cancer and there is strong evidence for reduced risk of diabetes.

In 2002, the Institute of Medicine established for the first time, adequate intake levels for fiber. Consumption surveys show that Americans are not consuming the recommended levels of fiber with fiber intakes averaging 14 grams. Increasing consumption of whole grains will help close the gap on the current low fiber intake of both adults and children.

Appropriateness of cups and ounces verses servings
In order to make the basic pyramid graphic simple to understand, the single term *serving or servings* should be used. Educational materials should then explain what the various serving sizes are. This is a very complicated task and should not be undertaken without reconciling the food guide pyramid serving sizes with those required on the nutrition label.

Selection of appropriate illustrative food patterns for consumer materials
Providing meal patterns for 12 calorie levels may be helpful for some health professionals; however, it would be totally confusing for the public and defeat the purpose of the Pyramid as an educational tool. It seems that **one** food pattern is all that is necessary. *(For example, select **one** food pattern [e.g.1600 calories] that covers the minimum nutrient needs for **adults and teens** and **one** food pattern [e.g.1200 calories] that is targeted to the needs of **young children**).*

With this approach, once minimum nutrient requirement are met it allows individuals the flexibility of choosing among the other foods to meet their individual calorie needs while allowing room for individual preferences. As long as the diet is nutritionally adequate and meets the other Dietary Guideline recommendations, it should not be necessary to prescribe meal patterns for all calorie levels. Focusing on a single daily food intake pattern would provide an opportunity for a clear and simple communication message. Table 1 provides examples of this approach.

Educational efforts than can be focused on helping the public understand:

- Servings/portion sizes
- Energy/activity balance
- How to fit an individual's food choices (*such as pizza, pasta dishes, other ethnic foods, soups, stew, mixed salads, fruit and dairy desserts*) into the basic food groups in the food guide pyramid.

595
Kliemer

Table 1

The base recommended (1600 calorie) food guide pattern for adults and teens would then be:

- ⇒ 6 servings of Grains (1/2 whole grain)
- ⇒ 2 servings of Fruit
- ⇒ 3 servings Vegetables
- ⇒ 2-3 servings of Meat and Beans
- ⇒ 2-3 servings of Milk
- ⇒ Additional fats and added sugar within the levels recommended in the IOM report.

The base recommended (1200 calorie) food guide pattern for young children would be:

- ⇒ 4 servings of Grains (1/2 whole grain)
- ⇒ 1 ½ servings of Fruit
- ⇒ 2 servings of Vegetables
- ⇒ 1-2 servings meat and Beans
- ⇒ 2 servings Milk
- ⇒ Additional fats and added sugars within the levels recommended in the IOM report

In closing, we commend CNPP for your continual research to test understanding and potential messages with the consumer. Thank you for the opportunity to comment on the proposed Food Guide Pyramid daily food intake patterns and technical support data. We look forward to continuing to discuss and develop the next generation of the Food Guide Pyramid.

Respectfully submitted,

Kathryn L. Wiemer

Kathryn L. Wiemer MS, RD, LD
Senior Manager
General Mills Bell Institute of Health & Nutrition